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Cc: Kenning, Jon[JKenning@mt.gov]; tteegarden@mt.gov[tteegarden@mt.gov]; McCarthy, Mindy[MMcCarthy3@mt.gov]; Schmidt, Christian[CSchmidt2@mt.gov]; Grant Weaver (g.weaver@cleanwaterops.com)[g.weaver@cleanwaterops.com]
From: Suplee, Mike
Sent: Fri 7/15/2016 6:15:18 PM
Subject: RE: Colstrip Nutrient Optimization Report

Hi Paul et al.;

I think this is a great layout for optimization studies as it provides a blueprint for what actually needs to be done on the ground at the facility. Per the requirements of the variance, a document like this must also include the community's exploration of the feasibility of nutrient trading within the watershed. This could range from a detailed consultant's evaluation to a series of communications or meetings with local ranchers who may want to land apply or install BMPs on their irrigated crops.

-Mike

From: LaVigne, Paul
Sent: Thursday, July 14, 2016 9:44 AM
To: DeVaney, Rainie; May, Jeff; Suplee, Mike; Laidlaw, Tina (Laidlaw.Tina@epa.gov)
Cc: Kenning, Jon; Teegarden, Todd; McCarthy, Mindy; Schmidt, Christian; Grant Weaver (g.weaver@cleanwaterops.com)
Subject: Colstrip Nutrient Optimization Report

Rainie, Jeff, Mike and Tina,

As you know, one of the requirements a discharger has to meet in order to get a nutrient variance is an optimization study. When we were sitting down and tweaking SB367, we put that language in with the thought of "operational optimization" (i.e., what can the operators do with the existing infrastructure to better improve nutrient removal?). The phrase "optimization study", of course has already been interpreted by some consultants to mean some sort of engineering approach that typically might include a small (or not) capital project. In one case, the consultant's approach to an optimization study was to evaluate the optimal use of alum, with the basic strategy of decreasing the addition of alum until the effluent TP went all the way up to the permit limit (an increase in TP of about 5 times the current value). That's not really what we had intended.

Over the last few years, we've been doing optimization training and support with the operators to help them remove nutrients better. Some of this effort is classroom training and some is on-site assistance. After we do the on-site assistance, our contractor, Grant Weaver, has been writing emails to the community's operator laying out strategies for optimization – basically writing up what was discussed on-site. Tina and I discussed the idea of turning this written document into an optimization report for the purpose of complying with the nutrient variance requirement.

So, attached is one of our first stabs at what I would consider an optimization study/report. I'd like to see what you all think of this format in terms of meeting the variance requirement. It is very basic in its form, but contains sufficient direction to the operators of fairly advanced operational strategies for enhanced nutrient removal and it has proven to be very effective.

Oh, in this particular community, they are in the design phase of an upgrade (the addition of a secondary clarifier – not for nutrient removal), so this report does include some recommendations associated with that upgrade. That is generally not the case. Our efforts here are to avoid upgrades as much as possible.

So, please let me know what you think.

Thanks.

Paul